

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Stephen S. Burns
Serial No.: 09/863,996
Filed: May 23, 2001
Title: Wireless Speech Recognition Tool
Group Art Unit: 2626
Examiner: HUYEN X. VO

Customer No.: 27160

Conf No. 1863

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

Sir:

In response to the Notice of Non-Compliant Appeal Brief, mailed on August 31, 2007, please enter the enclosed Appeal Brief which has been revised to overcome the objections in the Notice.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.:	09/863,996)
Filing Date:	May 23, 2001)
Inventor(s):	Burns et al)
Group Art Unit:	2655)
Examiner Name:	Hoyen Vo)
Customer No.:	27160)
Title:	WIRELESS SPEECH)
	RECOGNITION TOOL)
Confirmation No.:	1863)
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Applicant's Brief On Appeal

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Real Party In Interest

Title to the Application is currently in the names of the inventors; Stephen S. Burns, Mickey W. Kowitz and Michael F. Bell. No assignments have been filed to date.¹

Related Appeals and Interferences

There are no other appeals or interferences known to the Appellant or the Appellant's representative, which are believed to directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

¹ The inventors named above were employed by PocketScript , Inc . at the time of the invention. The assets of PostScript, Inc. were acquired by the Zix Corporation. The undersigned only recently became aware that the application was never assigned and is the process of tracking down the inventors to have an assignment assigned to the Zix Corporation.

Status Of Claims

Claims 1 , 2, 8, 9, 11, 13 and 29 stand rejected under 35 USC § 102(e) as being anticipated by Bennett et al US Patent No. 6,633,846 (“the Bennett et al patent”). Claims 10 and 12 stand rejected under 35 USC § 103(a) as being unpatentable over the Bennett et al patent in view of Kanevsky et al US Patent No. 6,615,171 (“the Kanevsky et al patent”).

Status Of Amendments

All amendments have been entered. The status of all claims is included in Appendix A.

Summary Of Claimed Subject Matter

In general, the present invention relates to a data retrieval system for retrieving data from a remote server. Data is retrieved by way of voice commands at a remote client. In order to minimize the complexity of the remote client, no voice recognition software resides in the remote client. Rather, the voice commands are converted to digital data streams that are transmitted to the remote server over a communications network. The digital data streams, representative of the voice commands, are decoded by voice recognition software entirely resident on the server. The decoded commands are then used to look up and retrieve data stored on the server and return it to client.

Claim 1 relates to a system for providing voice generated prescriptions as generally described in paragraph [0025] and paragraphs [0048] et seq. The system includes an input/output device, such as a PDA 40 (Fig. 1) , and a server 18 (Fig. 1) . The server 18 includes a database search engine 28 and a database 24. Voice input relating to a prescription is received at the client 12 and converted to a data stream. As set forth in paragraph [0032] of the specification, the data stream is a direct conversion of the analog voice data to equivalent digital data (“ The recording apparatus records the user’s voice transmission to the data stream, using sound recording methods such as a recording algorithm, software application or other sound recording applications known to those skilled in the art.”). The input/output system 40 (Fig. 1) includes a communication system for transferring the data stream to the server 18 (Fig. 1) over a wireless communication link. The server 18 (Fig. 1) includes speech recognition engine 28 (Fig. 2) that converts the data stream to text data. The database 24 (Fig. 1) is searched by the database search engine 24 (Fig. 1) to determine if the text data representative of the prescription spoken into the

client device is accurate. If the prescription spoken into the input/output device 40 (Fig. 1) is accurate, a second data stream is transmitted back to the input/output device 40 (Fig. 1).

. Claim 29 is a method claim for enabling a health care professional to verify patient information by way of voice input to a hand-held device, such as a PDA 40 (Fig. 1) . As discussed above , the voice input allows the health care professional to easily retrieve patient data available in a database 24 (Fig.1) over a wireless communication link. Claim 29, similar to claim 1, obviates the need for voice recognition software at the client. The claim also recites that patient information is provided on a database 24 (Fig. 1) to a remote server 18 (Fig. 1) used for receiving data from the hand held device 40 (Fig. 1) and convert it to text data in order to retrieve patient data from the database 24 (Fig. 1) The retrieved data is retrieved from the database 24 (Fig. 1) and returned to the hand-held device 40 (Fig. 1).

Claims 2 and 8-13 are dependent claims which further limit claim 1 upon which they depend

Grounds of Rejection to be Reviewed on Appeal

- I. The Examiner's rejection of Claims 1 , 2, 8, 9, 11, 13 and 29 under 35 USC § 102(e) as being anticipated by the Bennett et al patent.
- II. The Examiner's rejection of Claims 10 and 12 under 35 USC § 103(a) as being unpatentable over the Bennett et al and Kanevsky et al et al patents.

Argument

I. The Examiner's Rejection of Claims 1, 2, 8, 9, 11, 13 and 29 over the Bennett et al Patent should be reversed

Claims 1, 2, 8, 9, 11, 13 and 29 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Bennett, et al., U.S. Patent No. 6,633,846 ("the Bennett patent"). In order for there to be anticipation, each and every one of the elements must be found in a single reference. It is respectfully submitted that the claims recite elements clearly not disclosed or suggested by the Bennett patent. For example, the claims recite an input/output device for receiving voice inputs and converting those inputs to a first data stream and transmitting the first data stream to a server. As recited in the claim 1, the server contains a voice recognition engine which receives the first data stream and converts it to text. The server verifies the accuracy of the data in the first data stream. After verifying the accuracy of the data in the first data stream, the server transmits

a second data stream back to the client. Claim 1 and dependent claims 2, 8, 9, 11 and 13 recite a client which converts analog voice data to digital data in a well known manner and transmits the digitized voice data to a remote server. The remote server includes a voice recognition engine for converting the digitized voice data to text. As such, the client recited in the claims is fairly unsophisticated and thus inexpensive in that all of the voice recognition software resides on the server and none of the voice recognition software resides on the client. The Bennett et al patent discloses a system in which the client device includes a voice recognition system for digitizing the voice input and converting it to speech vectors. ("The client-side software program is comprised of a speech recognition program..." Bennett et al patent , Col. 7, lines 4 and 5; "The output of the partial processing done by SRE 155 is a set of speech vectors that are transmitted over the communication network 160..." Bennett et al patent, Col. 11, lines 6-8). The Bennett et al patent clearly does not disclose or suggest a client having a "user interface" which receives voice input and converts (i.e. digitizes) the voice input and transfers the digitized voice input (i.e. digital data stream) over a communication network to a remote server, as recited in the claims at issue. The Bennett et al teaches an architecture in which "speech vectors" are transmitted over the communication link-not digitized voice data. As such, there can be no anticipation.

Moreover, the claims at issue recite that the server verifies the accuracy of the information in the data stream, i.e. digitized voice data. For example, as set forth in paragraph [0068] of the instant specification , assuming the spoken words are "John Doe" , the server side voice recognition engine would return the following data: John Doe, Jonathon Doe or Jane Doe. The verification as recited in the claims compares these names with data stored in a database hosted on the server. For example, assuming John Doe was the only patient listed on the database, then only data concerning John Doe would be transmitted back to the client. As such, the system recited in the claims at issue verifies the accuracy of the spoken words.

The "verification" disclosed in the Bennett et al patent is really verification of the accuracy of the speech processing software. The Applicant agrees with the Examiner's characterization of the "verification " process as set forth in paragraph 3 of the Official Action, mailed on November 1, 2006. The " verification" process recited in the claims at issue is an improvement of the process taught by the Bennett et al patent. More particularly, as correctly pointed out by the Examiner in the aforementioned Office Action: "The NLE 190 performs a

fine search on returned possible matches to determine the best match and then transmit it back to the user at the client device for verification. “ Office Action, dated Nov. 1, 2006, paragraph 3 of the Detailed Action. Using the example above, if the spoken words at the client device are John Doe, the Bennett et al system would likely initially return either John Doe , Jonathon Doe or Jane Doe. The determination of the best possible match is based upon the accuracy of the speech processing engine. As such, the verification process disclosed in the Bennett et al patent does not verify the accuracy of the spoken words. For example, in the Bennett et al system if the spoken words were Jane Doe, “Jane Doe “ would be returned to the client. Using the example above, if the spoken words to the client device in the system in accordance with the present invention were Jane Doe and Jane Doe was not a patient as determined by comparison with data in the database, the system would return data to the effect that Jane Doe is not a patient. Thus, the system recited in the claims at issue actually verifies the accuracy of the spoken word and not just the accuracy of the voice recognition system. The Bennett et al patent does not disclose any means for verifying the accuracy of the spoken word as recited in the claims at issue. For all of the above reasons, it is respectfully submitted that the Bennett et al patent does not anticipate claims 1, 2, 8, 9, 11 and 13 .

Claim 29 is a method claim similar in scope to the apparatus claims at issue except Claim 29 does not the verification step. The method recited in claim 29 requires a similar architecture as the apparatus claims mentioned above with respect to the client device. In particular, claim 29 requires transmission of digitized voice data, i.e. a digital data stream from the client device to the remote server. As mentioned above, the Bennett et al system teaches a client device which includes voice recognition software and transmits speech vectors to the remote server. For these reasons and the reasons above, it is respectfully submitted that Claim 29 is not anticipated by the Bennett et al patent. The Board is respectfully requested to reverse the Examiner’s rejection of Claims 1, 2, 8, 9, 11, 13 and 29.

II. The Examiner’s rejection of Claims 10 and 12 under 35 U.S.C. 103(a) as being unpatentable over the Bennett et al and Kanevsky et al patents should be reversed.

Claims 10 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Bennett et al. patent in view of “Official Notice”. Analyzing these claims under the test set forth

by the Supreme Court in Graham v. John Deere , requires that (1) the scope and content of the prior art be determined; (2) the differences between the prior art and the invention be determined; and whether those differences would be obvious to one of ordinary skill in the art considering the invention as a whole.

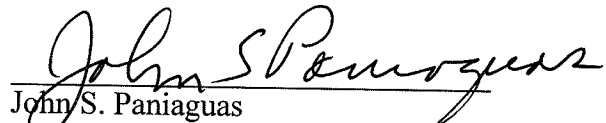
Claims 10 and 12 are dependent upon claim 1. As such many of the arguments set forth above are applicable. In particular, as mentioned above, the Bennett et al patent does not disclose a system which verifies the accuracy of the spoken word. The system in the Bennett et al patent simply verifies the accuracy of the voice recognition system. Also, the system recited in the claims simply transmits the digitized voice commands from the client to the server, thus obviating the need for any voice recognition software on the client. Such speech processing is highly computational intensive. Although the Bennett, et al. system purports to have real time performance, such real time performance could only be provided with a relatively expensive processor in order to achieve such real time performance and still handle the computational intensive processing required for speech recognition. (... the system achieves a real time performance that is believed to be highly optimized, because other latencies (i.e., client side computational latencies, packet formation latencies, transmission latencies are minimized). Bennett, et al., U.S. Patent No. 6,633,846, column 23, lines 1-4)).

The system recited in the claims at issue eliminates the need for an expensive processor for the client side device by simply utilizing the client device to convert the voice data to a first data stream, for example, a simple analog to digital conversion. As such, it is respectfully submitted that the Bennett patent *teaches away* from a client architecture which allows a relatively inexpensive client device, such as a PDA, to be used to access data from a remote data base as in the claims recited in the claims at issue. Based on these reasons, it is respectfully submitted that Claims 10 and 12 define patentable subject matter over the Bennett et al patent. The Board is respectfully requested to reverse the Examiner's rejection of these claims.

Conclusion

For all of the above reasons, the Board is respectfully requested to reverse the Examiner's rejections of the claims.

Respectfully Submitted,


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Date: Nov. 30, 2007

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APPENDIX A
CLAIMS ON APPEAL

1. (Rejected) A system for providing voice generated prescriptions comprising:

an input/output device which includes a user interface for receiving the voice of a user and converting it to a first data stream, said input/output device including a communication system for transferring said first data stream over a wireless communication link to a remote server system;

a remote server system for receiving said first data stream from the input/output device over said wireless communication link, said server system configured for processing the first data stream, exchanging data information with a database search engine and a database to verify the accuracy of the data in said first data stream based on data stored in the database, and transmitting a second data stream representative of a prescription back to said input/output device over said wireless communication link, said remote server having a speech recognition search engine for receiving said first data stream and converting it to text data representative of a prescription and providing said text data to said database search engine and generating said second data stream based upon said prescription representative data and data stored in a database, accessible by said remote server.

2. (Rejected) The system in claim 1, wherein the input/output device is a wireless hand-held device.

3 (Canceled) The system in accordance with claim 1, wherein the server is a speech-application-programming-interface compliant server.

4 (Canceled)The system in accordance with claim 1, wherein the recognition search engine is an automatic speech recognition engine.

5 (Canceled)The system in accordance with claim 1, wherein the server is connected to a wireless network.

6. (Canceled)The system in accordance with claim 1, wherein the server has business logic

enabling the user to write prescriptions electronically.

7 (Canceled)The system in accordance with claim 1, wherein the selected searchable data information includes stored prescription related information, thereby enabling the automated recognition engine to compare the textual data stream to the prescription related information and generate a matching prescription data stream.

8.(Rejected) The system as recited in claim 1, wherein said database includes related information, thereby enabling the server system to compare information in the first data with information stored in the database to verify the accuracy of the data in the first data stream.

9. (Rejected) The system as recited in claim 1, wherein the input/output device further includes a compression mechanism for compressing the first data stream.

10.(Rejected) The system as recited in claim 1, wherein the input/output device further includes an encryption mechanism for encrypting the first data stream.

11.(Rejected) The system as recited in claim 1, wherein the server system further includes a decompression mechanism for decompressing said first data stream.

12. (Rejected) The system as recited in claim 1, wherein the server system further includes a decryption mechanism for decrypting said first data stream.

13. (Rejected) The system as recited in claim 1, wherein said server system is configured to compare information in said first data stream with information stored in the database to verify the accuracy of the data in said first data stream.

14 (Canceled)The system in accordance with claim 1, wherein the speech application programming interface further comprises an application for learning speech dialects and different pronunciations of audibly transmitted information.

15 (Canceled)A method of wireless voice activated data retrieval, comprising the steps of: providing a data input/output device with a user interface, the user interface including a voice recording apparatus, for detecting and recording the user's voice and a communication apparatus, for enabling communication with a server; providing a server capable of exchanging information with the voice recognition providing data containing select information; providing a programming interface having a recognition engine capable of converting the first data stream into textual data and matching the textual data to the data element containing the selected list of information; wherein, when a user speaks into the input/output device the user interface detects

the voice and a first data stream is created and then communicated to the server, the programming interface converts the first data stream into textual data and compares the textual data to the stored information in the selected information database, matching data from the two sources and creating a second data stream for storing matched data, said matched data being communicated to said input/output device for data retrieval.

16 (Canceled) The method in accordance with claim 15, wherein the user interface is a graphical user interface having a viewable display for displaying the received matching data.

17 (Canceled) The method in accordance with claim 15, wherein the server is a speech-application-programming-interface compliant-server.

18 (Canceled) The method in accordance with claim 15 further comprising, providing a database containing information such that the matching data element can be compared to the information to verify the accuracy of the matching data.

19 (Canceled) The method in accordance with claim 15 further comprising, providing a database containing prescription information such that the matching data stream can be compared to the prescription information to verify the accuracy of the matching data.

20 (Canceled) The method in accordance with claim 15, wherein the select information comprises a list of prescription related terms such that the matching data contains prescription related data.

21 (Canceled) A voice recognition device for providing wireless communication with a connected client-server comprising: a speech-specific user interface for detecting the user's voice transmission, and displaying received data from a remotely connected server, a recording apparatus for converting the voice transmission into a recorded data element, a communication apparatus for providing bi-directional wireless communication of the data stream with a server.

22 (Canceled) The voice recognition device in accordance with claim 21, wherein the user

interface is a graphical user interface having a graphical interfacing application for enabling viewable display of textual returned data.

23 (Canceled) The voice recognition tool in accordance with claim 21, wherein the communication apparatus further comprises a compression mechanism for compressing the textual data stream such that the data stream can be quickly transmitted.

24 (Canceled) The voice recognition tool in accordance with claim 21, wherein the server application further comprises an encryption mechanism for encrypting the textual audible stream such that the stream can be securely transmitted.

25 (Canceled) The voice recognition tool in accordance with claim 21, wherein the server application further comprises a decompression mechanism for decompressing received resultant data stream

26 (Canceled) The voice recognition tool in accordance with claim 21, wherein the server application further comprises a decryption mechanism for decrypting received resultant data.

27 (Canceled) The voice recognition tool in accordance with claim 21, wherein the voice recognition device is a wireless hand-held device.

28 (Canceled) The voice recognition tool in accordance with claim 21, further comprising an indicating application capable of indicating the beginning and end of a voice transmission recording.

29. (Rejected) A method for enabling a healthcare professional to verify certain information relating to a patient, the method comprising the steps of:

(a) providing the health care professional with a hand-held device configured to receive voice input from said health care professional and convert said voice input to a first data stream representative of patient information and transmit said patient representative information to a remote server;

(b) providing patient information on a database, accessible by said health care professional by way of said hand held device over a wireless communication link;

(c) providing a remote server for receiving said first data stream from said hand-held device and converting it to text data in order retrieve patient data from said database; and

(d) returning patient data retrieved data from said data base to said hand held device

APPENDIX B
EVIDENCE APPENDIX

None

APPENDIX C
RELATED PROCEEDINGS APPENDIX

None